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ABSTRACT

The predictive validity of the equation used for determining entrance into the University of Washington's freshman class during the 1978-79 academic year is examined. The sample was comprised of all freshmen entering the university directly from high school in autumn quarter 1974 who had been tested through the Washington Pre-College Test Battery in partial fulfillment of the entrance requirement. Five admission indices were computed based solely on data for each of the five following groups: arts and sciences, business administration, engineering, nursing, and total. For each group, the correlation of the cumulative undergraduate grade point average as of summer quarter 1977 with each of three admissions indices was computed and compared. An earlier admissions index used in academic years 1974-75 to 1977-78 was one of the indices. Data on other academic variables as of summer 1977, including the number of quarters attended and number of credits earned, are also presented. (Author/SW)

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A Validation Study of the Prediction Equation Used in Determining Freshman Admissions to the University of Washington during the 1978-1979 Academic Year

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The predictive validity of the equation used for determining entrance into the University's freshman class during the 1978-1979 academic year (called the "NEW AI") is examined. The sample was comprised of all freshmen entering the UW directly from high school in Autumn Quarter 1974 who had presented results from the Washington Pre-College Test battery in partial fulfillment of the entrance requirement. Separately for 5 collegiate groups (Total, Arts and Sciences, Business Administration, Engineering, and Nursing), an admissions index based on data solely for that group (the "OPTIMAL AI") was computed. For each group, the correlation of the cumulative undergraduate GPA as of Summer Quarter 1977 with each of three admissions indices (an earlier Admissions Index used in processing freshman applicants in the academic years of 1974-1975 to 1977-1978, the NEW AI, and the OPTIMAL AI) was computed and compared. In addition, data on other academic variables as of summer 1977 (number of quarters attended and number of credits earned) are also presented.

Educational Assessment Center Project # 071

A Validation Study of the Prediction Equation Used in Determining Freshman Admissions to the University of Washington during the 1978-1979 Academic Year

Beginning Autumn Quarter 1974 the University of Washington (UW) initiated a new admissions policy for freshmen entering directly from high school. This new policy required freshman applicants to submit scores from a standard admissions test in addition to their high school transcript. Test score results were linearly combined with overall high school grade point average (GPA) to calculate an Admissions Index (AI). Applicants were then rank ordered according to their AIs and offers of admission extended from the top until the freshman class was filled. For further discussion of the development of the AI consult Lunneborg (Note 1) and de Wolf (Note 2). More recently, starting with the 1978-1979 academic year, the UW revised its undergraduate admissions system to include a more equitable means for admitting freshmen entering directly from high school, community college transfers, and transfers from 4-year colleges/universities (Gillmore, Note 3). In Gillmore, a new prediction equation for freshmen entering directly from high school (called the "NEW AI") was developed with data from the 1976 entering freshman class. The current report presents the results of a validation study which contrasted the predictive power of this NEW AI with the earlier AI.

In brief, the sample for this validation study was comprised of all freshmen entering the UW directly from high school in Autumn Quarter 1974 who had presented results from the Washington Pre-College (WPC) Test battery in partial fulfillment of the entrance requirement. For each entrant the following WPC data was collected: Verbal Composite score, Quantitative Composite score, and 3-year overall high school GPA. These data were then used to compute three admissions indices: the AI, the NEW AI, and an optimal admissions index (called the "OPTIMAL AI") based solely on the data for that group of entering freshmen. The correlations between UW cumulative GPA as of Summer 1977 (called the "final UG GPA") and each of these three admissions indices were computed and compared. Other data collected from the UW academic record, up to and including Summer Quarter 1977, were: total

number of quarters enrolled as UW undergraduate, total credits attempted as undergraduate, and UW major. Based on the UW major as of Summer Quarter 1977, it was ascertained that four collegiate groups contained the bulk of the sample (Arts and Sciences, Business Administration, Engineering, and Nursing). Separately for each group, a unique regression equation predicting an OPTIMAL AI was developed based solely on data for students in that particular group. Then for each collegiate group correlations between the 3 admissions indices (AI, NEW AI, and unique OPTIMAL AI) and the final UG GPA were computed and their predictive powers compared. Thus, not only could the predictive powers of these 3 indices for each collegiate group be compared, but this also allowed for an examination of the predictive power of each index across the 4 groups.

Method

Sample. All freshmen entering the University in Autumn Quarter 1974 directly from high school who had presented WPC Test results to fulfill part of the entrance requirement comprised the sample (de Wolf, Note 4). Those students who did not complete at least one quarter of academic work at the UW between autumn 1974 and summer 1977, inclusive, were eliminated leaving a sample of 2,511.

Data. The WPC Test results provided not only two composite scores, the Verbal Composite (VC) and the Quantitative Composite (QC), but also the overall high school GPA (WPC HS GPA) for the 3-year period covering the freshman to junior years, inclusive. The students' UW transcripts, up to and including Summer Quarter 1977, provided the remaining data: the cumulative undergraduate GPA as of Summer Quarter 1977 (called the "final UG GPA"); the total number of quarters enrolled as an undergraduate as of Summer Quarter 1977; the total number of credits earned as an undergraduate as of Summer Quarter 1977; and the UW undergraduate major as of Summer Quarter 1977. It should be noted that while the majority of these students had been enrolled continuously as UW undergraduates during the 3-year period covered by this study (59% had been enrolled for 9 quarters or more), the sample also includes data for those members of the autumn 1974 entering freshman class who had ceased attending the University (i.e., those having withdrawn and those having been dismissed for low scholastic performance)

and, in addition, data for those members of this group who attended the UW off-and-on, in an irregular fashion during this period. Therefore, data provided by the transcripts for these latter two groups would reflect their academic status (final GPA, credits earned, and UW major) during their final quarter of attendance as University undergraduates.

Forming the collegiate groups. An inspection of students' majors determined that about 91% of the total sample (N = 2,275) comprised four groupings. The Business Administration Group (N = 214) included not only students enrolled in the UW College of Business Administration but also students in the College of Arts and Sciences whose declared major was "pre-BA." The remainder of those enrolled in the College of Arts and Sciences (N = 1694) comprised the A & S Group. The two remaining Groups, Engineering (N = 265) and Nursing (N = 102), consisted of all students with majors in the respective UW colleges.

Statistical analyses. For each student three admissions indices were computed, the first being the AI presented in Lunneborg (Note 1):

AI = (.158) (WPC HS GPA) + (.27) (VC + QC) - 10.71.

Next, the NEW AI was computed using Equation 24 provided by Gillmore (Note 3):

NEW AI = (.6739) (WPC HS GPA) + (.73) (VC + QC) - 22.55.

Lastly, a regression equation was developed based on data of the total sample where the VC, QC, and WPC HS GPA were the predictors and UW final UG GPA the criterion. This equation predicted the OPTIMAL AI and was of the general form:

OPTIMAL AI = b_1 (WPC HS GPA) + b_2 (VC) + b_3(QC) - a

where b_1, b_2, and b_3 were the beta weights for WPC HS GPA, VC, and QC, respectively, and a the additive constant. The correlations between each of these three admissions indices (AI, NEW AI, and OPTIMAL AI) were then computed and their predictive powers compared.

Finally, separately for each of the four collegiate groups (A & S, Business Administration, Engineering, and Nursing), a unique regression equation was developed which was similar in form to that above used to compute the OPTIMAL AI for the total sample, but which was derived solely from data of students with majors in that particular group. Then separately

for each collegiate group, the correlations between each of the three admissions indices (AI, NEW AI, and OPTIMAL AI) and the final UG GPA were computed and compared.

Results

What does the profile of this cohort of Autumn Quarter 1974 entering freshmen look like? First considering the WPC data, they had a mean WPC HS GPA of 3.39, a mean Verbal Composite score of 55.1, and a mean Quantitative Composite score of 56.2 (standard deviations or SDs of .39, 9.1, and 9.0, respectively). Using these three pre-college variables AIs were computed for each member of the sample. Table 1 presents the distribution of AIs which have been grouped in increments of 5 between 50 and 85, i.e., 51-55, 56-60, etc. The AIs ranged from 29 to 103 with a mean of 72.9 (SD = 9.1). Since WPC data was available for a number of discretionary

Table 1

Number of Students in the Admissions Index Groups

Admissions Index Group	N(%)
50 and below	63(3)
51-55	42(2)
56-60	66(3)
61-65	291(12)
66-70	485(19)
71-75	517(21)
76-80	521(21)
81-85	374(15)
86 and above	152(6)
Total	2511(100)

admittees, i.e., freshmen entering the University into special programs outside the scope of standard admissions procedures, Table 1 includes 304

freshmen with AIs below 64, the minimum for regular admissions into the autumn 1974 entering freshman class.

Next, let's look at their academic profile 3 years after entering the University as of Summer Quarter 1977. Using the Admissions Index grouping presented in Table 1 as the breakout variable, Table 2 presents data on the final UG GPA. Overall, this group of autumn 1974 entering freshmen had a final UG GPA of 2.84 (SD = .67). For clarity in interpreting the data, GPAs have been grouped in increments of .25 beginning with 2.00, i.e., 2.00-2.25, 2.26-2.50, etc. Percents are based on row totals and, therefore, reflect the distribution of students in each Admissions Index Group, for ex., in the 51-55 Admissions Index Group (N = 42) 36% had GPAs below 2.00, 17% between 2.00 and 2.25, 14% between 2.26 and 2.50, etc. In general, low AIs tended to be associated with low final UG GPAs and high AIs with high GPAs. That is, while only 10% of the total group had final UG GPAs below 2.00, the lowest four AI groups had between 22% and 41% of their totals in this "low" scholarship group (41%, 36%, 23%, and 22% of the 0-50, 51-55, 56-60, and 61-65 AI groups, respectively, had GPAs in this range). A similar pattern could be noted in the next GPA group, 2.00-2.25, with each of these same four AI groups having a relatively larger proportion of their total in this GPA group than would be expected (6% of the total vs. 27%, 17%, 14%, and 12% of the 0-50, 51-55, 56-60, and 61-65 AI groups, respectively, had GPAs in this range). On the other hand, while only 4% of the total group had GPAs in the 3.76-4.00 GPA range, 22% of those in the highest AI groups, 86+, had GPAs in this range as did 8% of the second highest AI group, 81-85.

Table 3 presents the data on the total number of quarters in attendance as of Summer Quarter 1977 with the Admissions Index Groups again the breakout variable. On the average students had attended the University for 7.8 quarters (SD = 2.7). Since this study spanned a period of 3 academic years (1974-1975, 1975-1976, and 1976-1977), a student enrolled full-time during this period would be in attendance at least 9 quarters and over half of the total group (59% or N = 1481) could be considered full-time students having been enrolled 9 quarters or more. Admissions Index Group was related to duration of enrollment at the University with those in lower AI groups being less likely, and those in the higher AI groups more likely, to have been enrolled full-time, for instance, 23% and 33% of the two lowest AI groups (0-50 and 51-55,

Table 2

Cumulative GPA Group, as of Summer Quarter 1977, by Admissions Index Group

Admissions Index Group	Cumulative GPA Group, as of Summer Quarter 1977									
	0-1.99 N(%)	2.00-2.25 N(%)	2.26-2.50 N(%)	2.51-2.75 N(%)	2.76-3.00 N(%)	3.01-3.25 N(%)	3.26-3.50 N(%)	3.51-3.75 N(%)	3.76-4.00 N(%)	Total N(%)
0-50	26(41)	17(27)	12(19)	3(5)	4(6)	--	--	1(2)	--	63(100)
51-55	15(36)	7(17)	6(14)	7(17)	4(10)	3(7)	--	--	--	42(100)
56-60	15(23)	9(14)	15(23)	13(20)	8(12)	3(5)	2(3)	--	1(2)	66(100)
61-65	64(22)	36(12)	55(19)	51(18)	45(15)	26(9)	11(4)	2(1)	1(0)	291(100)
66-70	43(9)	40(8)	60(12)	94(19)	103(21)	80(16)	48(10)	13(3)	4(1)	485(100)
71-75	42(8)	26(5)	44(9)	81(16)	116(22)	98(19)	74(14)	28(5)	8(2)	517(100)
76-80	23(4)	12(2)	27(5)	61(12)	94(18)	119(23)	98(19)	63(12)	24(5)	521(100)
81-85	16(5)	7(2)	11(3)	24(6)	37(10)	64(17)	95(25)	89(24)	31(8)	374(100)
86+	4(3)	1(1)	1(1)	5(3)	10(7)	18(12)	28(18)	51(34)	34(22)	152(100)
Total	248(10)	155(6)	231(9)	339(14)	421(17)	411(16)	356(14)	247(10)	103(4)	2511(100)

Note. For the total group the mean cumulative GPA as of Summer Quarter 1977 was 2.84 (SD = .67).

Table 3

Number of Quarters in Attendance, as of Summer Quarter 1977, by Admissions Index Group

Admissions	Number of Quarters												
Index Group	1	2	3	4	5	6	7	8	9	10	11	12	Total
	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
0-50	2(3)	4(6)	15(24)	5(8)	5(8)	7(11)	7(11)	5(8)	8(13)	5(8)	--	--	63(100)
51-55	--	1(2)	5(12)	4(10)	2(5)	7(17)	2(5)	2(5)	12(29)	4(10)	1(2)	1(2)	41(100)
56-60	--	1(2)	10(15)	3(5)	6(9)	6(9)	4(6)	5(8)	20(30)	8(12)	2(3)	1(2)	66(100)
61-65	11(4)	14(5)	29(10)	16(6)	20(7)	24(8)	26(9)	26(9)	76(26)	36(12)	7(2)	4(1)	289(100)
66-70	7(1)	17(4)	42(9)	14(3)	21(4)	30(6)	26(5)	36(7)	169(35)	90(19)	24(5)	9(2)	485(100)
71-75	20(4)	12(2)	37(7)	15(3)	18(4)	56(11)	29(6)	42(8)	167(32)	80(16)	30(6)	8(2)	514(100)
76-80	13(3)	11(2)	36(7)	12(2)	12(2)	35(7)	26(5)	46(9)	195(38)	92(18)	34(7)	8(2)	520(100)
81-85	7(2)	2(1)	14(4)	11(3)	9(2)	12(3)	22(6)	26(7)	154(42)	85(23)	23(6)	5(2)	370(100)
86+	1(1)	--	6(4)	3(2)	4(3)	--	4(3)	9(6)	78(52)	32(21)	9(6)	4(3)	150(100)
Total	61(2)	62(2)	194(8)	83(3)	97(4)	177(7)	146(6)	197(8)	879(35)	432(17)	130(5)	40(2)	2498(100)

Note. For the total group the mean number of quarters in attendance was 7.8 (SD = 2.7).

Table 4

Total Credits Earned Group, as of Summer Quarter 1977, by Admissions Index Group

Admissions Index Group	Total Credits Earned Group, as of Summer Quarter 1977										
	0-20	21-40	41-60	61-80	81-100	101-120	121-140	141-160	161-180	181+	Total
	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
0-50	12(19)	10(16)	10(16)	14(22)	3(5)	7(11)	7(11)	--	--	--	63(100)
51-55	3(7)	9(21)	5(12)	6(14)	6(14)	4(10)	9(21)	--	--	--	42(100)
56-60	4(6)	9(14)	6(9)	11(17)	6(9)	12(18)	14(21)	1(2)	3(5)	--	66(100)
61-65	27(9)	34(12)	33(11)	31(11)	38(13)	59(20)	56(19)	10(3)	2(1)	1(0)	291(100)
66-70	26(5)	41(8)	37(8)	38(8)	53(11)	101(21)	151(31)	34(7)	4(1)	--	485(100)
71-75	39(8)	35(7)	32(6)	46(9)	72(14)	83(16)	159(31)	47(9)	4(1)	--	517(100)
76-80	33(6)	24(5)	42(8)	24(5)	49(9)	82(16)	195(37)	62(12)	8(2)	2(0)	521(100)
81-85	16(4)	13(3)	17(5)	15(4)	26(7)	68(18)	139(37)	68(18)	8(2)	4(1)	374(100)
86+	3(2)	3(2)	7(5)	5(3)	7(5)	13(9)	69(45)	37(24)	6(4)	2(1)	152(100)
Total	163(6)	178(7)	189(8)	190(8)	260(10)	429(17)	799(32)	259(10)	35(1)	9(0)	2511(100)

Note. For the total group the mean number of credits earned, as of Summer Quarter 1977, was 101.5 (SD = 42.5).

respectively) vs. 73% and 82% of the two highest AI groups (81-85 and 86+, respectively) had attended 9 quarters or more.

Data on the third UW academic variable, total credits earned as of Summer Quarter 1977, is presented in Table 4 with the Admissions Index Groups as the breakout variable. Credits are grouped in increments of 20 beginning with 0, ex., 0-20, 21-40, etc. The mean number of credits earned was 101.5 (SD = 42.5). As might be expected, credits earned was related to AI group with those with low AIs more likely than expected to have earned few credits (51% of those in the 0-50 AI group earned 60 credits or less vs. only 21% of the total group) while those with high AIs more likely to have amassed larger number of credits (ex., 30% of those in the highest AI group of 86+ had accumulated at least 141 credits vs. only 12% of the total group).

Table 5 presents the mean (M) and standard deviation of the WPC HS GPA, the WPC Verbal Composite score, the WPC Quantitative Composite score, and the UW final UG GPA, separately, for the collegiate groups and for the total group. While the collegiate groups had comparatively similar means on both WPC HS GPA and VC (means ranged from 3.34 to 3.54 for WPC HS GPA and from 54.97 to 55.73 for VC), they differed to a greater extent on the remaining two variables, QC and final UG GPA (means ranged from 53.49 to 61.98 for QC and from 2.75 to 3.28 for final UG GPA). Overall, the Engineering Group had the highest WPC composite scores means (55.73 and 61.98 for VC and QC, respectively). The Business Administration Group, however, had the highest WPC HS GPA and final UG GPA means (3.54 and 3.28 for WPC HS GPA and final UG GPA, respectively) and, in fact had mean WPC composite test scores nearly equal to those of the Engineering Group (55.60 and 59.59 for VC and QC, respectively). The Business Administration

Table 5

Mean (M) and Standard Deviation (SD) of High School GPA, Verbal Composite Score, Quantitative Composite Score, and UW Final GPA for Total Group and, Separately, for each Collegiate Group

Group (N)	High School GPA		Verbal Composite		Quantitative Composite		UW Final GPA	
	M	SD	M	SD	M	SD	M	SD
Total (2511)	3.39	.39	55.11	9.05	56.20	8.95	2.84	.67
A & S (1694)	3.34	.40	54.97	9.42	54.94	9.18	2.75	.67
Business Administration (214)	3.54	.30	55.60	7.87	59.59	6.29	3.28	.36
Engineering (265)	3.47	.37	55.73	8.14	61.98	6.94	2.95	.59
Nursing (102)	3.46	.32	55.44	8.56	53.49	7.60	3.01	.62

Group was unique for another reason--of all the collegiate groups, it had the smallest degree of variability on each of the four variables included in Table 5, especially final UG GPA.

Separately, for the total group and for each of the collegiate groups, a series of regression analyses were then computed using the UW final UG GPA as the criterion and various combinations of the 3 WPC variables (i.e., WPC HS GPA, VC, and QC) as the predictors. Table 6 presents the results of these analyses where the WPC variables were grouped to form three predictor sets: First, WPC HS GPA as the only predictor; next, WPC HS GPA plus VC as the predictors; and third, all 3 WPC variables as predictors. However, before examining the results presented in Table 6, it should be noted that the three WPC predictor variables were highly correlated among themselves (ex., for the total group the correlation was .53 between VC and QC, .43 between VC and WPC HS GPA, and .49 between QC and WPC HS GPA) and, this being the case, it is not possible to unambigiously state the proportion of criterion variance (R^2) associated with each predictor. The interpretation of increments in R^2, therefore, is not a simple matter. In general, when predictors are highly correlated, a variable entered first will account for a larger proportion of variance than if it were entered second, third, or fourth. Thus, in Table 6 the difference in R^2 between the first and second predictor sets (WPC HS GPA and WPC HS GPA plus VC, respectively) does not reflect the "actual" or "total" amount of criterion variance due to VC but rather should be interpreted as the proportion of variance due to VC <u>after</u> the variance shared with WPC HS GPA has been taken out. Similarly, the difference in R^2 between the second and third predictor

Table 6

Multiple Correlation (R) of Final Undergraduate GPA with Three Predictor Sets for the Total Group and, Separately, for the Collegiate Groups

Group (N)	Predictor set					
	WPC HS GPA		WPC HS GPA & VC		WPC HS GPA, VC, & QC	
	R	R^2	R	R^2	R	R^2
Total (2511)	.462	.213	.483	.234	.489	.239
A & S (1694)	.455	.207	.484	.234	.484	.235
Business Administration (214)	.303	.092	.356	.127	.401	.161
Engineering (265)	.587	.344	.593	.352	.631	.398
Nursing (102)	.584	.342	.667	.445	.699	.489

sets (WPC HS GPA plus VC and WPC HS GPA plus VC and QC, respectively) does not reflect the total amount of criterion variance due to QC but rather the proportion due to QC after the variance shared with both WPC HS GPA and VC had been removed. Keeping these facts in mind, the question is: Did the pattern of increments in R^2 due to VC (and to both VC and QC) above that accounted for by WPC HS GPA alone differ for the various college groups?

For the total group, the addition of VC along with WPC HS GPA as a predictor increased the proportion of variances accounted for by 2.1% (21.3% and 23.4% for WPC HS GPA and WPC HS GPA plus VC, respectively) with the addition of both QC and VC as predictors resulting in about the same increase, 2.6% (21.3% and 23.9% for WPC HS GPA and WPC HS GPA plus VC and QC, respectively). A similar pattern was noted for the A & S Group where there was a 2.7% increase in R^2 when VC was added to WPC HS GPA and a 2.8% increase when both VC and QC were added (20.7%, 23.4%, and 23.5% for WPC HS GPA, WPC HS GPA plus VC, and WPC HS GPA plus VC and QC, respectively). The pattern of variance increments was slightly different for the other three collegiate groups with VC and QC contributing a relatively greater proportion of criterion variance: For the Business Administration Group the increase in R^2 after adding VC was 3.5% and after adding VC and QC 6.9% above that accounted for by WPC HS GPA alone (9.2%, 12.7%, and 16.1% for WPC HS GPA, WPC HS GPA plus VC, and WPC HS GPA plus VC and QC, respectively); for the Engineering Group the corresponding increases were .8% and 4.6% for VC and VC plus QC, respectively (34.4%, 35.2%, and 39.8% for WPC HS GPA, WPC HS GPA plus VC, and WPC HS GPA plus VC and QC, respectively); and for the Nursing Group, where the largest increases were noted, 10.1% and 14.5% for VC and VC plus QC, respectively (34.2%, 44.5%, and 48.9% for WPC HS GPA, WPC HS GPA plus VC, and WPC HS GPA plus VC and QC, respectively).

The collegiate groups also differed in Table 6 with respect to the amount of variance accounted for by the WPC predictors. Considering just WPC HS GPA as the predictor, the proportion of variance accounted for was lowest for the Business Administration Group, 9.1%, and highest for the Engineering Group, 34.4%. When all three WPC variables were

considered as the predictors, Business Administration was again the group having the lowest R^2, 16.1%, but the Nursing Group had the largest proportion of variance accounted for, 48.9%.

Table 7 contains the correlations of the final UG GPA, as of Summer Quarter 1977, with each of three admissions indices (AI, NEW AI, and OPTIMAL AI), separately for the total group and for each collegiate group. The formulae used to compute the OPTIMAL AI for each group in Table 7 were identical to those developed in Table 6 when the predictor set consisted of all three WPC variables. Therefore, the multiple correlation (R) of WPC HS GPA, VC, and QC with the criterion of final UG GPA (that is, the data presented in the third column of Table 6) was the same as the corresponding zero-order correlation (r) of the OPTIMAL AI with the final UG GPA (that is, the data presented in the bottom row of Table 7).

As Table 7 indicates, within a college group both the AI and NEW AI accounted for about the same proportion of criterion variance (r^2) and ranged from a low of about 14% for the Business Administration Group to a high of nearly 48% for the Nursing Group. Considering the groups separately, while the OPTIMAL AI accounted for a larger proportion of criterion variance than either the corresponding AI or NEW AI, as might be expected, both the AI and NEW AI approached the predictive power of the uniquely derived OPTIMAL AI.

Table 7

Correlation (r) of Final UG GPA, as of Summer Quarter 1977, with each of three Admissions Indices for the Total Group and, Separately, for each Collegiate Group

Admissions Index	College group: Total (N=2511)		A & S (N=1694)		Bus:Admin. (N=214)		Engineering (N=265)		Nursing (N=102)	
	r	r^2	r	r^2	r	r^2	r	r^2	r	r^2
AI	.487	.237	.480	.230	.382	.146	.612	.374	.693	.480
NEW AI	.488	.238	.481	.231	.367	.135	.615	.378	.677	.459
OPTIMAL AI	.489	.239	.484	.235	.401	.161	.631	.398	.699	.489

Discussion

Overall, the average student in this autumn 1974 entering freshman class had achieved a 2.84 cumulative undergraduate GPA, had been enrolled for 7.8 quarters, and had earned 101.5 credits as of Summer Quarter 1977. For this group of entrants, the AI was associated with each of these three UW academic status variables with those with low AIs more likely to have had lower cumulative GPAs, earned fewer credits, and been enrolled fewer quarters, while those with relatively higher AIs had higher GPAs, earned more credits, and been enrolled more quarters than would be expected.

The data also showed that the NEW AI, used for processing freshman applicants during the current academic year, predicted the final UG GPA just about as well as the AI which was used in processing freshman applicants during the preceeding three academic years. In fact, considering each college group separately, both the AI and NEW AI accounted for about the same proportion of variance as did the OPTIMAL AI which was based on data solely for students with majors in that group. Thus, it appears from the data that separate prediction equations for these collegiate groups are not warranted at this time.

Finally, the data revealed that by considering students grouped on the basis of collegiate major, different degrees of predictability could be achieved. For the total group the proportion of variance accounted for was about 24%. Using this as the standard of comparison, the Business Administration Group was relatively less predictable (r^2 = about 16%) than the total group, the A & S Group as predictable (r^2 = c. 24%), and the Engineering and Nursing Groups relatively more predictable (r^2's of 40% and 49%, respectively). While it is not clear at present why in Table 7 the Business Administration Group did not have the same degree of predictability as the Engineering and Nursing Groups, since all three are composed of students whose curriculums and majors are rather homogeneous, it could be that the lesser degree of variability (especially for the criterion, UW final UG GPA) of the Business Administration Group noted in Table 5 is partially responsible.

Reference Notes

1. Lunneborg, C. E. Summarization of empirical findings on new freshman admissions standards (Project reports # 254 and 255). Seattle: University of Washington, Educational Assessment Center, January 1974.

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4. de Wolf, V. A. Washington Pre-College Test norms and admission's index data for University of Washington freshmen entering autumn 1974 (Project report # 277). Seattle: University of Washington, Educational Assessment Center, May 1975.